

# Tuff Tread

502 W. Montgomery STE 120  
Willis, TX 77378  
PH: (800)827-2017 FAX: (888)898-8974  
[www.SuperTuff.com](http://www.SuperTuff.com)

## Inrush Limiter Installation or Replacement

Very few of our treadmills actually need an inrush limiter. Before installing or replacing an inrush limiter, make sure the treadmill is experiencing the following symptoms:

- The breaker panel for the power line that the treadmill is plugged into is within 30 feet / 10 meters of the treadmill.
- The treadmill sometimes causes the breaker to trip when the treadmill is first turned on.
- The treadmill never causes the breaker to trip after it has been running for more than 5 seconds.
- The treadmill does not always cause the breaker to trip on start-up.

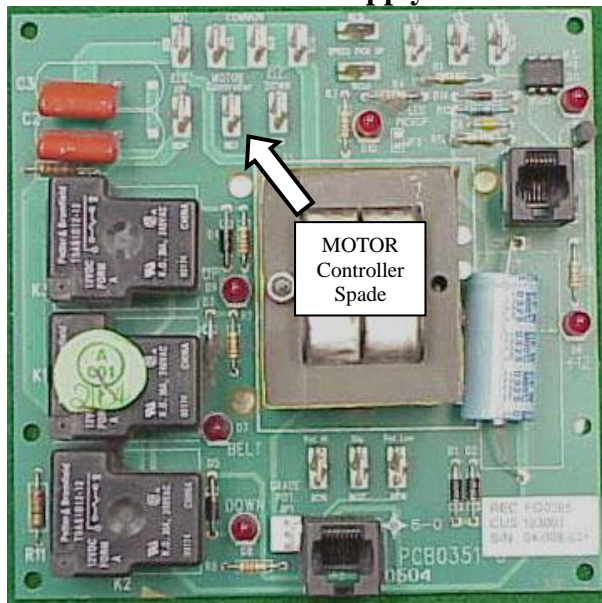
If the treadmill in question does not fit all four of these criteria, the problem may be caused by something else. Call Tuff Tread at 800.827.2017 to properly diagnose the problem. If the treadmill previously had an inrush limiter, it may not actually need it. Try replacing the inrush limiter with a standard 12-gage wire with the appropriate spade connectors. If the treadmill then experiences the symptoms above, install the inrush limiter as follows:

**Make sure that the treadmill is unplugged before beginning this procedure.**

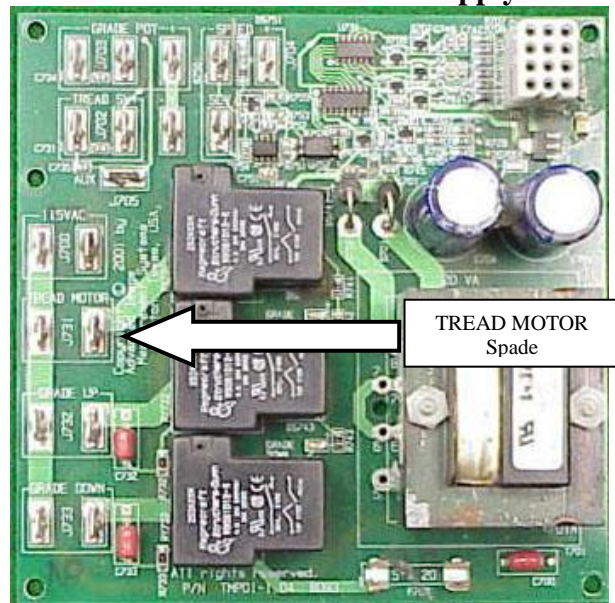
Replace the AC Hot wire that runs from the power supply to the PWM with the inrush limiter. The original wire should be black, and will run from the power supply spade marked “MOTOR Controller – BC7” or “TREAD MOTOR” or “MOTOR HOT – J3” depending on the power supply version.

Compare the power supply in the treadmill to the following pictures to determine which version power supply is installed.

**Version 1 Power Supply**



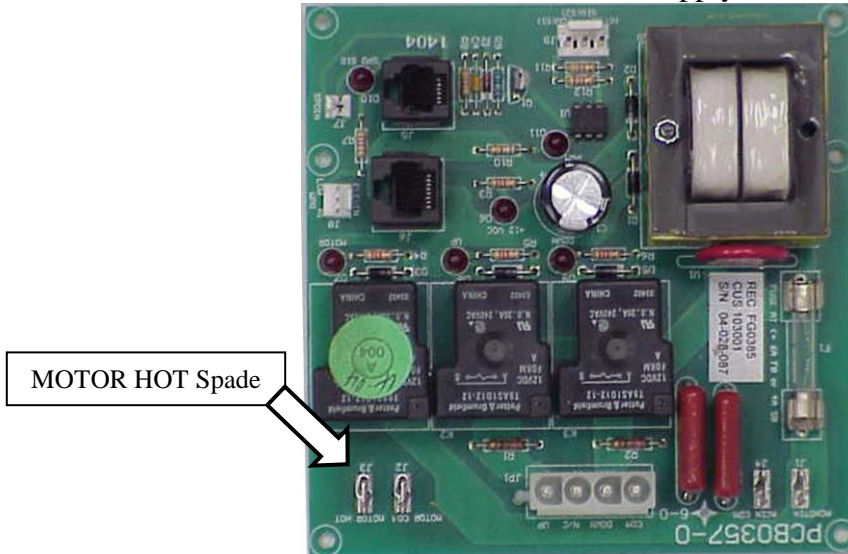
**Version 2 Power Supply**



# Tuff Tread

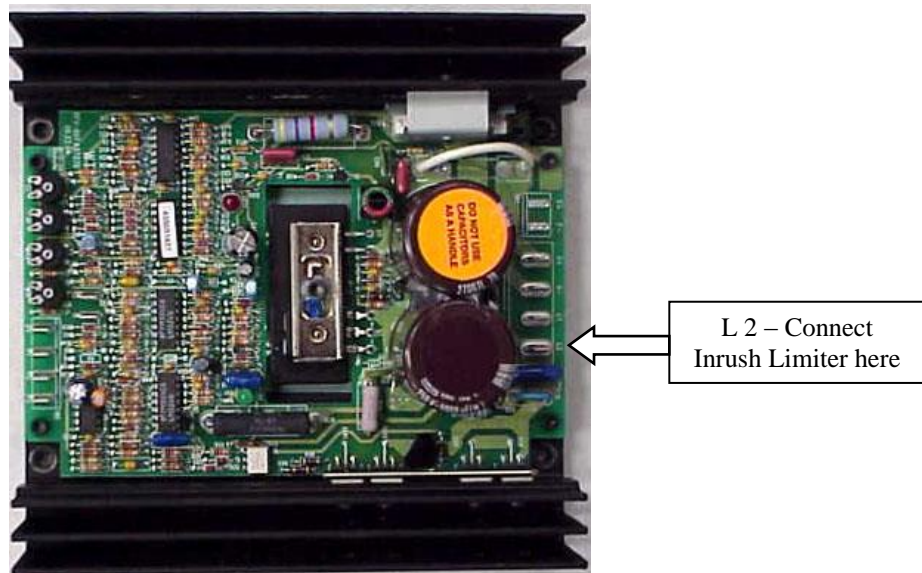
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Version 3 Power Supply



The other end of the inrush limiter will attach to the PWM (motor control) board at the spade marked “L2”. See the diagram below.

PWM – Motor Control Board



After attaching the inrush limiter to the correct spades, bend the wires of the inrush limiter so that they are out of the way of any fans or moving parts. The black, nickel-sized resistor on the inrush limiter will get very hot while in use, so make sure it does not rest on or touch any other parts under the hood. As always, if you have any questions or problems, please contact the service department at Tuff Tread.